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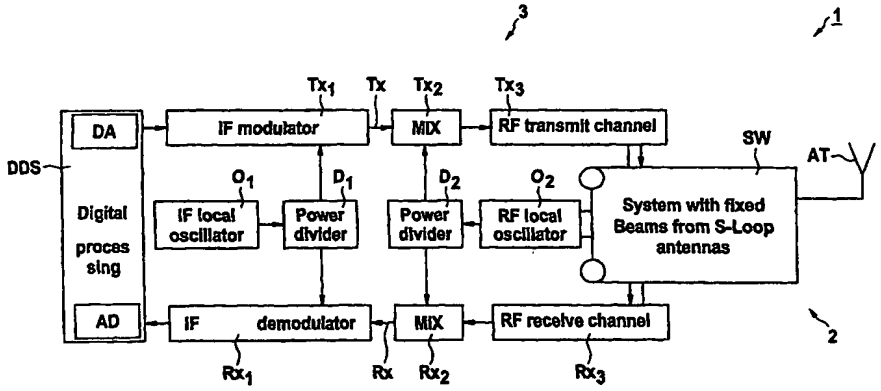
(54) Title: TRANSCEIVER APPARATUS FOR USE IN A MULTI-FREQUENCY COMMUNICATION SYSTEM, BASE STATION OF A MULTI-FREQUENCY COMMUNICATION SYSTEM, METHOD FOR USE OF THE TRANSCEIVER APPARATUS, METHOD OF TRANSCEIVING A MULTI-FREQUENCY SIGNAL IN A MULTI-FREQUENCY COMMUNICATION SYSTEM



(57) Abstract: In a transceiver apparatus for use in a multi-frequency communication system a multi-frequency antenna terminal operation allows antenna transmission and reception-modes to be combined. A frequency conversion circuitry has a transmission path and a reception path, wherein each of these paths communicatively connects a signal processor and an antennaswitch. The antenna-switch comprises a multi switch, a transmission-multiplexer and a reception-multiplexer, wherein the antenna switch may be controlled by the signal processor and the multiplexers may be controlled by the signal generator via the multi switch. The antenna has a transmission connector for connecting the transmission path to the antenna and a reception connector for connecting the reception path to the antenna. Advantageous configurations of the transceiver provide an S-loop antenna design and phase matching units in an antenna terminal and a Butler-matrix of the antenna-switch. This provides an antenna and an antenna-switch with an optimal matching factor and consequently improves multi-frequency transceiver operation .

WO 2004/021593 A1